

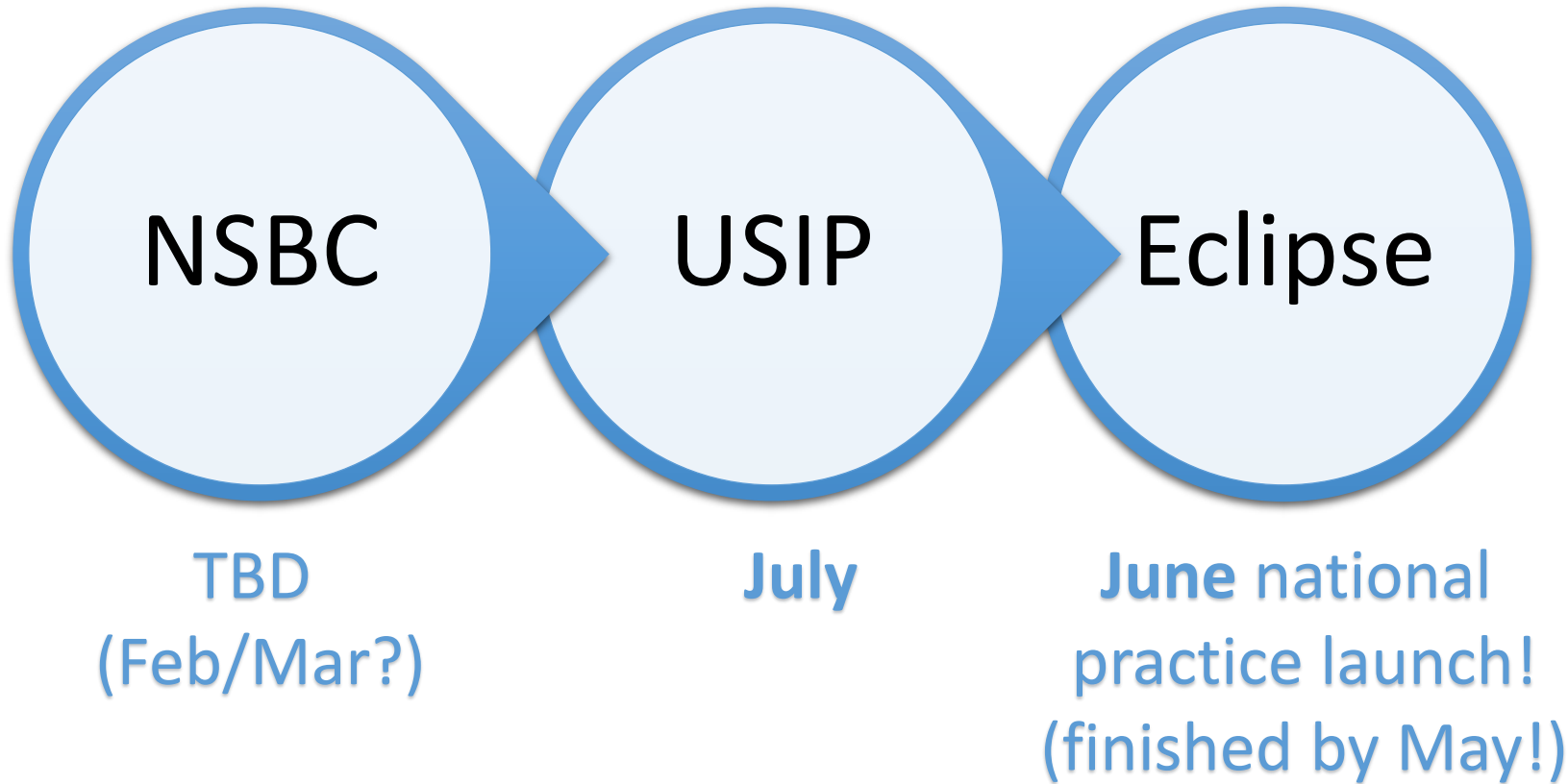


# Welcome to 2017 Ballooning!

NSBC, Eclipse, USIP



# Projected Schedule



No local launches  
1 SpSt student

# NSBC

- 11 payloads from 6 towns
- Fall 2016 launch postponed due to weather
  - We are holding all team payloads and equipment
- TBD future launch
- Need to select date in advance for distributing email



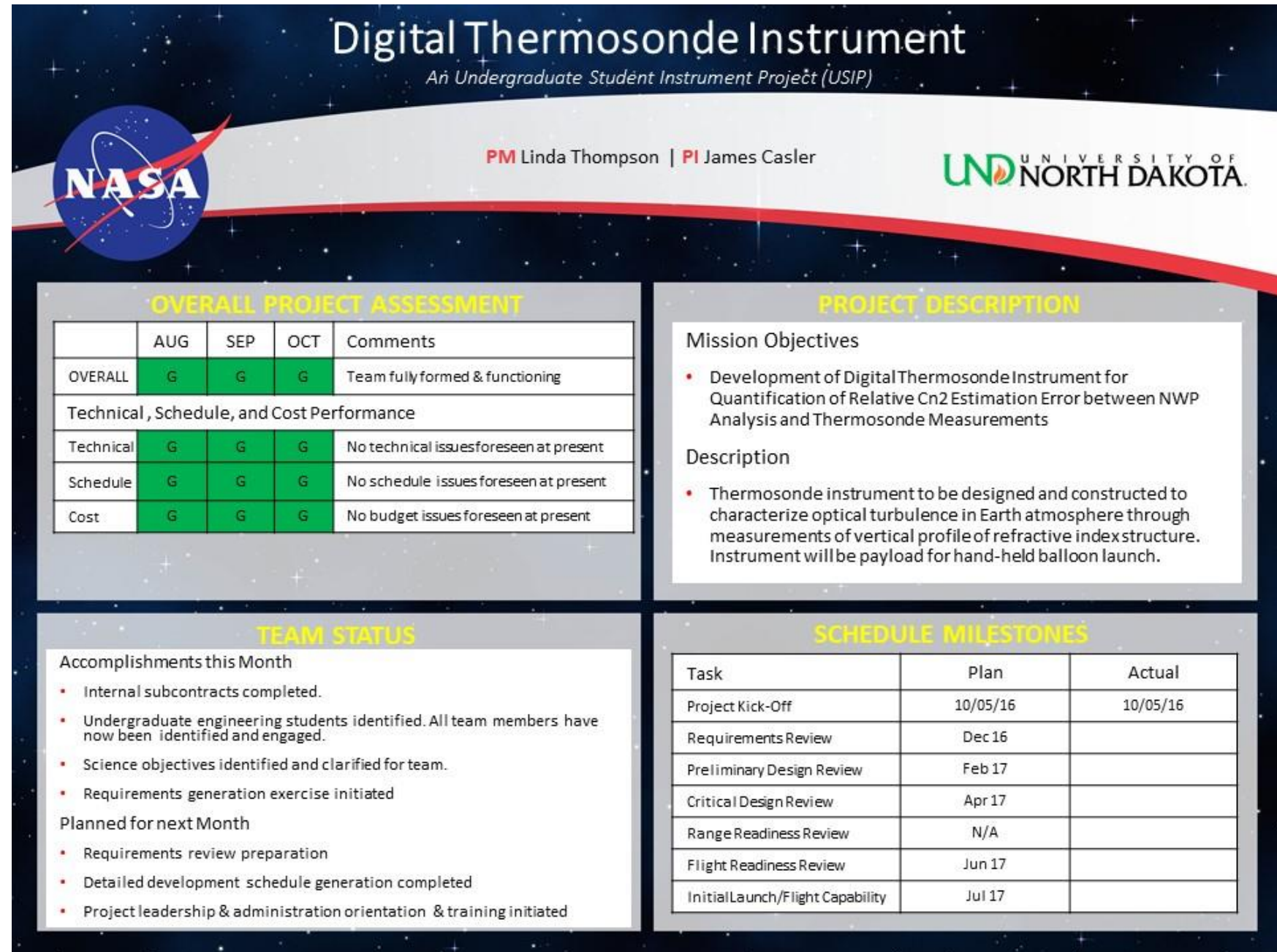
# USIP

PI – Jim Casler

Ron, Caitlin, Marissa

Collaborations between the EE,  
AtSci, and SpSt departments

Launches scheduled for July



## Digital Thermosonde Instrument

An Undergraduate Student Instrument Project (USIP)

PM Linda Thompson | PI James Casler

UNIVERSITY OF NORTH DAKOTA

### OVERALL PROJECT ASSESSMENT

	AUG	SEP	OCT	Comments
OVERALL	G	G	G	Team fully formed & functioning
Technical, Schedule, and Cost Performance				
Technical	G	G	G	No technical issues foreseen at present
Schedule	G	G	G	No schedule issues foreseen at present
Cost	G	G	G	No budget issues foreseen at present

### PROJECT DESCRIPTION

#### Mission Objectives

- Development of Digital Thermosonde Instrument for Quantification of Relative Cn2 Estimation Error between NWP Analysis and Thermosonde Measurements

#### Description

- Thermosonde instrument to be designed and constructed to characterize optical turbulence in Earth atmosphere through measurements of vertical profile of refractive index structure. Instrument will be payload for hand-held balloon launch.

### TEAM STATUS

#### Accomplishments this Month

- Internal subcontracts completed.
- Undergraduate engineering students identified. All team members have now been identified and engaged.
- Science objectives identified and clarified for team.
- Requirements generation exercise initiated

#### Planned for next Month

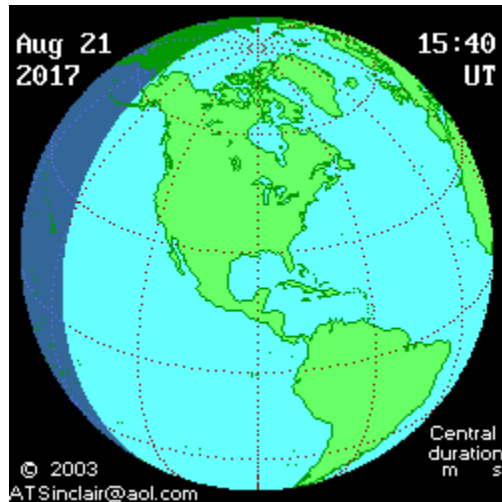
- Requirements review preparation
- Detailed development schedule generation completed
- Project leadership & administration orientation & training initiated

### SCHEDULE MILESTONES

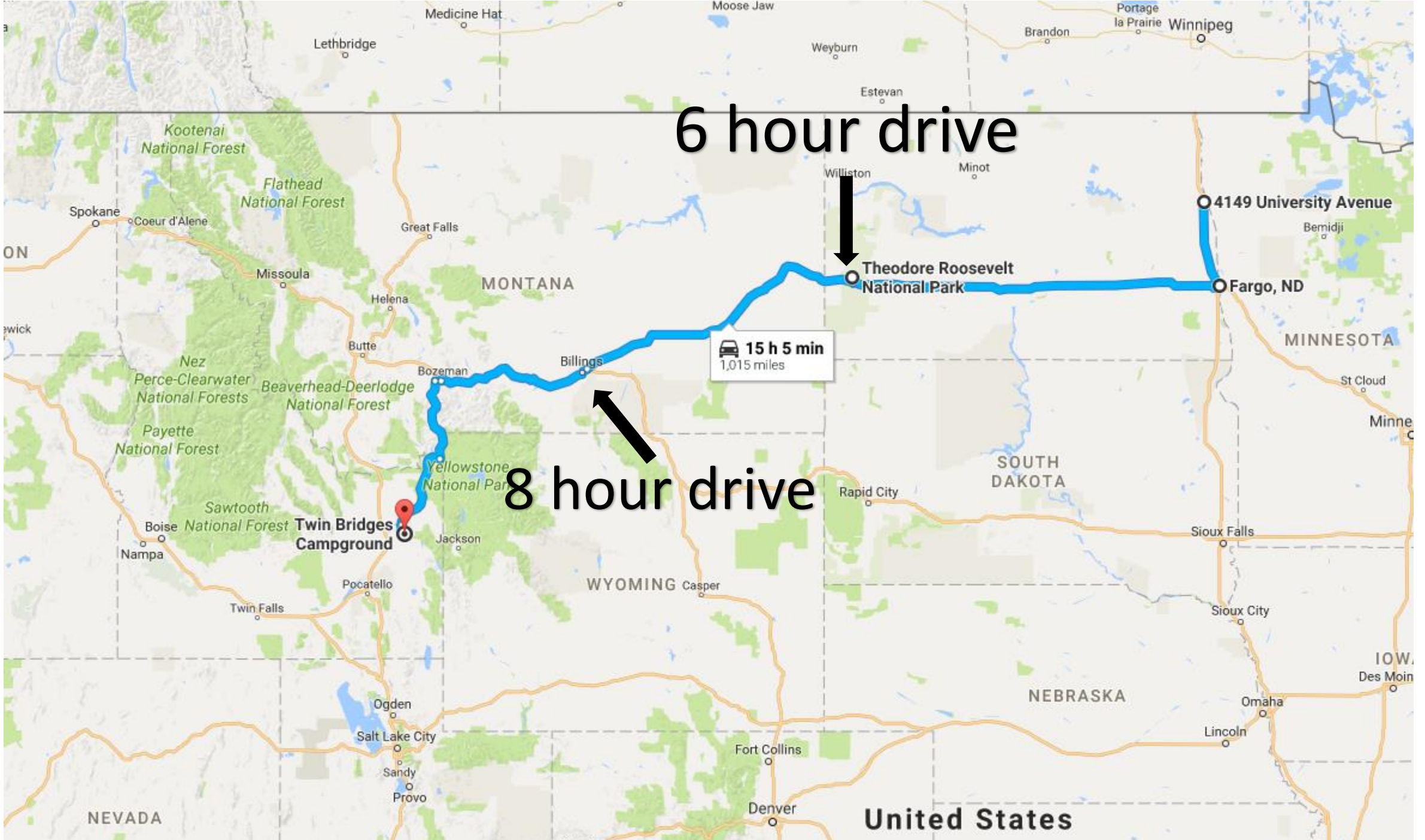
Task	Plan	Actual
Project Kick-Off	10/05/16	10/05/16
Requirements Review	Dec 16	
Preliminary Design Review	Feb 17	
Critical Design Review	Apr 17	
Range Readiness Review	N/A	
Flight Readiness Review	Jun 17	
Initial Launch/Flight Capability	Jul 17	

# Eclipse

- August 21, 2017, 11:34 am MDT (launch time 10:14 am)
- Departing on August 17 (stay in TRNP)
- Idaho: Aug 18-22



- Lots of preparation required throughout the semester – we can do it!
- Mike and Denise will orchestrate operations, but this is a **team effort** 😊
- We are lucky to have great teamwork and ballooning experience
- We need a headcount of students *travelling* with us to the launch. All are invited; all are encouraged to help this semester
- Campus testing, tethered launches, remote set up, practice fill, NSBC practice, etc.
- *Mock scenarios!* Tight schedules, interchangeable roles, “the sun won’t wait for us!”

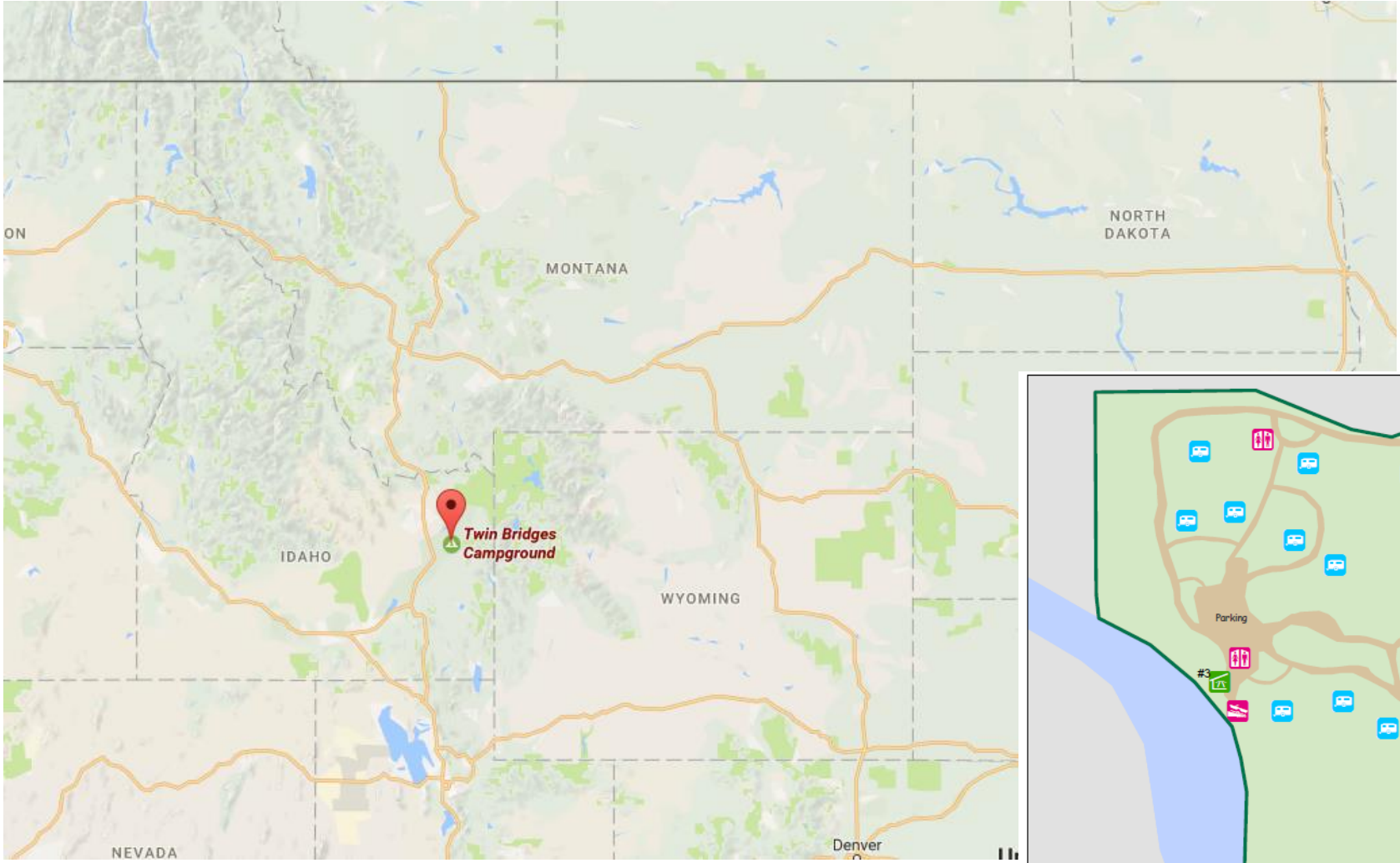


6 hour drive

15 h 5 min  
1,015 miles

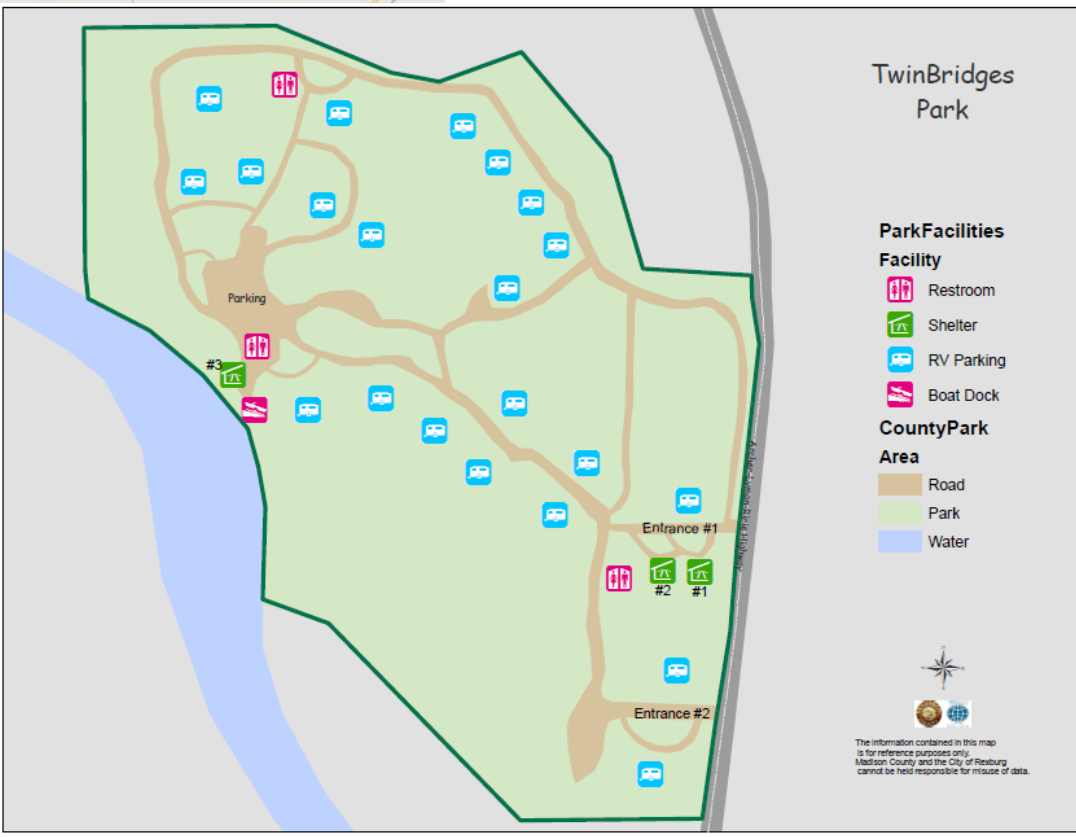
8 hour drive

United States



3 RV sites  
1 Shelter

4 nights



# To do:

- RFD modem – Mike as lead
- Job assignments
- Schedule coordinators meeting
- Technical sessions after group meeting?
- Practice!!

Payload Team				
Ground Station	Video	RFD (images)	Cut-down	Safety and Transportation
Power?				Air Traffic on Eclipse Day
				Launch Simulations
“what does this team need?”	“what happens if it’s not working after we launch?”	“how are we sampling images from the ground?”	Who’s emailing the site?	“what paperwork should we travel with?”

(just an example)



# Other

- 1/19/17 noon teleconference
- Ping-pong ball payload
  - Reaching out (Kerry Hartman – Nueta Hidatsa Sahnish College)
- Caitlin updates
- Other discussion points
  - t-shirts?

## Action Items

- Send Shane requested topics for the technical telecom
- Send Shane possible date for individual team calls
- Report to Shane your Milestones 1-6 (excluding Milestone 3)
- Send Shane your team website or blog to be added to the eclipse ballooning page
- Invite students to join the Eclipse Ballooning Project Student Communications Google Group here:  
<https://groups.google.com/forum/?hl=en#!forum/sgebpsc>
- Telecom 1/12/17, 11 AM Mountain Standard Time